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(54) Title: POLYMERISATION PROCESS

(57) Abstract: A process for the copolymerisation of ethylene and an  $\alpha$ -olefin having 7 to 10 carbon atoms in a fluidised bed gas phase reactor in the presence of a single site polymerisation catalyst comprises operating the process in condensed mode and wherein the amount of said  $\alpha$ -olefin is maintained below that at which substantial condensation in the reactor occurs. The preferred  $\alpha$ -olefin is 1-octene and the preferred single site polymerisation catalyst is a metallocene complex. By use of the process conditions of the present invention, higher  $\alpha$ -olefins may be successfully employed in a gas phase process provided the amount of higher  $\alpha$ -olefin comonomer is maintained below that at which substantial condensation occurs: Such operation is also dependent upon the operation temperature and the boiling point of the higher  $\alpha$ -olefin and the process is particularly advantageous when performed in the presence of catalysts able to incorporate high levels of comonomers at low comonomer inventories.



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